

DOCUMENT A00802

DETAIL SHEETS

Order No. _____

**THE COMMONWEALTH OF MASSACHUSETTS
MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
TEN PARK PLAZA – BOSTON, MA**

ESTIMATE OF QUANTITIES - DETAIL SHEET

City-Town:	<u>Chelsea</u>	Year:	<u>2014</u>
STA:	<u>21+40.00 to 84+45.56</u>	Road:	<u>Silver Line Busway</u>
		Class:	<u>Urban Minor Arterial</u>
Type of Project:	<u>Silver Line Gateway & Washington Avenue (Bridge C-09-001)</u>	Date:	<u>August 18, 2014</u>

Earth Excavation	<u>20,200</u> Cu. Yards	Reinforced Concrete Excavation	<u>800</u> Cu. Yards
Old Pavement Excavation	<u>500</u> Cu. Yards	Bridge Excavation	<u>900</u> Cu. Yards
Class B Trench Excavation	<u>1,400</u> Cu. Yards	Class B Rock Excavation	<u>150</u> Cu. Yards
Special Borrow	<u>7,800</u> Cu. Yards	Gravel Borrow	<u>9,600</u> Cu. Yards
Gravel Borrow for Bridge Foundation			<u>200</u> Cu. Yards
Gravel Borrow for Backfilling Structures and Pipes			<u>2,000</u> Cu. Yards

Full Depth Pavement – Busway

Surface Course: 1-1/2" Superpave Surface Course – 9.5 (SSC-9.5) over
2-1/4" Superpave Intermediate Course – 19.0 (SIC-19.0) over
2-1/4" Superpave Intermediate Course – 19.0 (SIC-19.0)

Base Course: 4-1/2" Superpave Base Course – 37.5 (SBC-37.5)

Subbase: 4" Dense Graded Crushed Stone over
8" Gravel Borrow, Type B

Cement Concrete Pavement – Busway

Surface Course: 10" Cement Concrete Pavement (5000 PSI)

Subbase: 4" Dense Graded Crushed Stone over
8" Gravel Borrow, Type B

Cement Concrete Walk/Wheelchair Ramp

Surface Course: 4" Cement Concrete Pavement

Foundation: 8" Gravel Borrow, Type B

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Town-City: CHELSEA SILVER LINE GATEWAY & WASHINGTON AVE (BRIDGE C-09-001) Year: 2014**HMA Parking Lot**Surface Course: 1-1/2" Superpave Surface Course – 9.5 (SSC-9.5) over
 2-1/2" Superpave Intermediate Course – 19.0 (SIC-19.0)

Foundation: 8" Gravel Borrow, Type B

Full Depth Pavement – Shared-Use Path

Surface Course: 1-1/2" Superpave Surface Course – 9.5 (SSC-9.5)

Intermediate Course: 2-1/2" Superpave Intermediate Course – 19.0 (SIC-19.0)

Subbase: 8" (Min.) Gravel Borrow, Type B

Full Depth Pavement - Driveway

Surface Course: 6" Cement Concrete Pavement

Foundation: 8" (Min.) Gravel Borrow, Type B

BRT Platform

Surface Course: 8" Cement Concrete Pavement

Foundation: 8" Gravel Borrow, Type B

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Town-City: CHELSEA SILVER LINE GATEWAY & WASHINGTON AVE (BRIDGE C-09-001) Year: 2014

ALL ITEMS NOT COMPLETELY DESCRIBED AND LOCATED ON THE PLANS ARE TO BE DETAILED AS SHOWN BELOW:

**ITEM 100.91 PRE & POST CONSTRUCTION SURVEY, GEOTECHNICAL
INSTRUMENTATION AND MONITORING (SITE 1)**

Work to conduct a Pre-Construction survey to document existing conditions of the building at 63 Washington Avenue and monitor any movement of the Building during construction of the Bridge Replacement Structure and associated Underpinning operations.

**ITEM 100.92 PRE & POST CONSTRUCTION SURVEY, GEOTECHNICAL
INSTRUMENTATION AND MONITORING (SITE 2)**

Work to conduct a Pre-Construction survey to document existing conditions of the Saint Rose Church building at 598 Broadway and the Broadway bridge southern abutment, and monitor any movement of these structures during construction of Retaining Wall 1

**ITEM 100.93 PRE & POST CONSTRUCTION SURVEY, GEOTECHNICAL
INSTRUMENTATION AND MONITORING (SITE 3)**

Work to conduct a Pre-Construction survey to document existing conditions of other buildings and structures, including houses along Willow Street, and monitor any movement of the buildings during construction of Retaining Walls 2 and 3.

ITEM 100.99 MBTA TRACK DEFORMATION MONITORING

For monitoring MBTA railroad tracks during various portions of bridge construction. As shown on Plans and as directed by the Engineer.

ITEM 101. CLEARING AND GRUBBING

For non-pavement area within the limits of work, including tree and stump removal. As shown on Plans and as directed by the Engineer.

ITEM 114.1 DEMOLITION OF SUPERSTRUCTURE OF BRIDGE NO. C-09-001

Demolition of the existing Washington Avenue Bridge Structure.

ITEM 115.6 STONE MASONRY SUBSTRUCTURE DEMOLITION

At the north abutment, as outlined in Specifications.

ITEM 127.1 REINFORCED CONCRETE EXCAVATION

For removal of existing reinforced concrete structures, including walls, walk surfaces and other elements, necessary for construction of the Project.

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ESTIMATE OF QUANTITIES - DETAIL SHEET

Town-City: CHELSEA SILVER LINE GATEWAY & WASHINGTON AVE (BRIDGE C-09-001) Year: 2014**ITEM 150.1 SPECIAL BORROW**

For installation of borrow material under busway and structures to replace unsuitable soils.

ITEM 151. GRAVEL BORROW

Used in full depth pavement, driveways and for sidewalk construction areas as shown on the plans and/or as directed by the Engineer.

ITEM 151.1 GRAVEL BORROW FOR BRIDGE FOUNDATION

Used at Washington Avenue Bridge as shown on the plans and/or as directed by the Engineer.

ITEM 151.2 GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES

Used for the installation of under drain pipes and structures and/or as directed by the Engineer.

ITEM 153.2 LIGHTWEIGHT AGGREGATE FILL

Used at Washington Avenue Bridge as shown on the plans and/or as directed by the Engineer.

ITEM 156. CRUSHED STONE

For installation in trenches and structure foundations where groundwater is encountered and as directed by the Engineer

ITEM 170. FINE GRADING AND COMPACTING

At areas under proposed full depth roadway and sidewalk paving and as directed by the Engineer.

ITEM 180.5 LICENSED SITE PROFESSIONAL

For providing a Licensed Site Professional (LSP) to provide the services necessary to comply with the requirements of the Massachusetts Contingency Plan (MCP).

ITEM 180.6 MISCELLANEOUS SOILS TESTING

For obtaining soil samples from various locations within the project area and to perform laboratory analyses.

ITEM 184.1 DISPOSAL OF TREATED WOOD PRODUCTS

For disposal of treated wood products including railroad timbers.

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ESTIMATE OF QUANTITIES - DETAIL SHEET

Town-City: CHELSEA SILVER LINE GATEWAY & WASHINGTON AVE (BRIDGE C-09-001) Year: 2014**ITEM 201.** **CATCH BASIN**

As shown on the plans and as directed by the engineer, including those on:
Everett Avenue, Spruce Street, Arlington & Sixth Street, Cottage Street, and Eastern Avenue

<u>STATION</u>	<u>OFFSET</u>		<u>STATION</u>	<u>OFFSET</u>	
23+41	85.3	RT	58+45	18	RT
26+23	15	LT	58+95	20	RT
26+23	15	RT	62+89	15	LT
30+11	15	LT	62+89	18.5	RT
30+11	15	RT	64+52	15	LT
35+04	15	LT	64+52	18.5	RT
35+04	15	RT	66+82	18.5	RT
40+32	12	LT	67+01	18.5	LT
40+32	15	RT	68+84	18.5	LT
44+34	15	LT	68+84	18.5	RT
44+34	12	RT	72+10	18.5	LT
47+00	15	LT	72+10	18.5	RT
47+00	15	RT	74+58	15	LT
50+51	15	LT	74+58	18.5	RT
50+51	4	RT	76+10	18.7	RT
56+00	15	LT	76+39	19.3	LT
56+00	15	RT	80+50	17.6	LT
58+45	15	LT	80+50	14.3	RT

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Town-City: CHELSEA SILVER LINE GATEWAY & WASHINGTON AVE (BRIDGE C-09-001) Year: 2014**ITEM 202. MANHOLE**

As shown on the plans and as directed by the engineer, including those on:
 Everett Avenue, Spruce Street, Arlington & Sixth Street, and Eastern Avenue

<u>STATION</u>	<u>OFFSET</u>		<u>STATION</u>	<u>OFFSET</u>	
26+41	3	RT	58+55	13	RT
28+60	4	RT	59+38	41	RT
30+25	4	RT	63+03	2	LT
35+17	4	RT	64+68	2	LT
36+95	4	RT	68+74	3.2	LT
39+34	3	RT	66+69	2	LT
40+18	3	RT	72+18	2.9	LT
44+47	0	RT	74+78	5.3	LT
47+13	0	RT	76+28	9.4	LT
50+37	0.5	RT	76+51	17.1	LT
50+67	13	LT	80+70	2	LT
54+54	9	LT	82+48	39.5	RT
56+23	2	RT			

ITEM 203. SPECIAL MANHOLE

<u>STATION</u>	<u>OFFSET</u>	
39+46	20	LT
65+90	6.5	LT
76+71	19.1	RT

ITEM 205. LEACHING BASIN

<u>STATION</u>	<u>OFFSET</u>		<u>STATION</u>	<u>OFFSET</u>	
36+44	20	RT	49+35	18	RT
36+68	20	RT	49+75	20	RT
47+35	21	RT	50+14	15	LT
47+75	21	RT	56+67	18.5	RT
48+15	21	RT	56+79	15	LT
48+55	21	RT	56+78	18.5	RT
48+95	21	RT	58+47	18.5	RT

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ESTIMATE OF QUANTITIES - DETAIL SHEET

Town-City: CHELSEA SILVER LINE GATEWAY & WASHINGTON AVE (BRIDGE C-09-001) Year: 2014**ITEM 220. DRAINAGE STRUCTURE ADJUSTED**

As shown on the plans and as directed by the engineer, including those on:
Everett Avenue, Spruce Street, Arlington & Sixth Street, Washington Avenue, Cottage Street,
and Eastern Avenue.

ITEM 220.3 DRAINAGE STRUCTURE CHANGE IN TYPE

<u>STATION</u>	<u>OFFSET</u>	
23+52	75	RT

ITEM 220.7 SANITARY STRUCTURE ADJUSTED

As shown on the plans and as directed by the engineer, including those on:
Everett Avenue, Spruce Street, Arlington & Sixth Street, Washington Avenue, and Cottage
Street.

ITEM 220.8 SANITARY STRUCTURE REMODELED

As shown on the plans and as directed by the engineer, including those on:
Washington Avenue

ITEM 221. FRAME AND COVER

To be used with Items 201., 202., 203., and/or as directed by the Engineer.

ITEM 222.1 FRAME AND GRATE - MHD CASCADE TYPE

To be used with Items 201., 202., 203., and/or as directed by the Engineer.

ITEM 223. FRAME AND GRATE REMOVED AND RESET

As shown on the plans and as directed by the engineer, including those on:
Everett Avenue, Spruce Street, Arlington & Sixth Street, and Cottage Street.

ITEM 223.2 FRAME AND GRATE (OR COVER) REMOVED AND DISCARDED

As shown on the plans and as directed by the engineer, including those on:
Spruce Street

ITEM 227.3 REMOVAL OF DRAINAGE STRUCTURE SEDIMENT

For drainage structure adjustments and changes in type, and/or as directed by the Engineer.

ITEM 227.4 MASONRY PLUG

For plugging abandoned drainage pipe, and/or as directed by the Engineer.

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Town-City: CHELSEA SILVER LINE GATEWAY & WASHINGTON AVE (BRIDGE C-09-001) Year: 2014**ITEM 258. STONE FOR PIPE ENDS**

For stone erosion pad at flared end sections and as directed by the Engineer.

ITEM 303.08 8 INCH DUCTILE WATER IRON PIPE (MECHANICAL JOINT)

As shown on the Washington Avenue plans and as directed by the Engineer.

ITEM 303.12 12 INCH DUCTILE WATER IRON PIPE (MECHANICAL JOINT)

As shown on the Washington Avenue plans and as directed by the Engineer.

ITEM 309. DUCTILE IRON FITTINGS FOR WATER PIPE

As shown on the Washington Avenue plans and as directed by the Engineer.

ITEM 325.24 24 INCH STEEL PIPE CASING FOR WATER PIPE

For portions of busway – as required and as directed by the Engineer.

ITEM 345.6 6 INCH TEMPORARY SERVICE PIPE

As shown on the Washington Avenue plans and as directed by the Engineer.

ITEM 350.12 12 INCH GATE AND GATE BOX

As shown on the Washington Avenue plans and as directed by the Engineer.

ITEM 355.10 10 INCH GATE AND GATE BOX REMOVED AND STACKED

As shown on the Washington Avenue plans and as directed by the Engineer.

ITEM 357.06 6 INCH GATE BOX

As shown on the Washington Avenue plans and as directed by the Engineer.

ITEM 357.10 10 INCH GATE BOX

As shown on the Washington Avenue plans and as directed by the Engineer.

ITEM 363.1 1 INCH CORPORATION COCK

As shown on the Washington Avenue plans and as directed by the Engineer.

ITEM 367.12 12 INCH IRON PLUG

As shown on the Washington Avenue plans and as directed by the Engineer.

ITEM 371.08 8 INCH COUPLING

As shown on the Washington Avenue plans and as directed by the Engineer.

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ESTIMATE OF QUANTITIES - DETAIL SHEET

Town-City: CHELSEA SILVER LINE GATEWAY & WASHINGTON AVE (BRIDGE C-09-001) Year: 2014**ITEM 371.10 10 INCH COUPLING**

As shown on the Washington Avenue plans and as directed by the Engineer.

ITEM 371.12 12 INCH COUPLING

As shown on the Washington Avenue plans and as directed by the Engineer.

ITEM 373.12 12 INCH WATER PIPE INSULATION

As shown on the Washington Avenue plans and as directed by the Engineer.

ITEM 379.1 1 INCH AIR RELEASE VALVE

As shown on the Washington Avenue plans and/or as directed by the Engineer.

ITEM 381. SERVICE BOX

As shown on the Washington Avenue plans and as directed by the Engineer.

ITEM 381.3 SERVICE BOX ADJUSTED

As shown on the Washington Avenue plans and as directed by the Engineer.

ITEM 402. DENSE GRADE CRUSHED STONE FOR SUB-BASE

Used for full depth construction areas.

ITEM 415. PAVEMENT MICROMILLING

Used for pavement milling and resurfacing areas.

ITEM 440. CALCIUM CHLORIDE FOR ROADWAY DUST CONTROL

Used at full depth construction areas, as directed by the engineer.

ITEM 443. WATER FOR ROADWAY DUST CONTROL

Used at full depth construction areas, as directed by the engineer.

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Town-City: CHELSEA SILVER LINE GATEWAY & WASHINGTON AVE (BRIDGE C-09-001) Year: 2014**ITEM 450.90** **CONTRACTOR QUALITY CONTROL**

For All Superpave Items

ITEM 451. **HMA FOR PATCHING**

For unsound pavement after milling

ITEM 452. **ASPHALT EMULSION FOR TACK COAT**

Smooth Surface- Application Rate 0.05 gallon per SY, 0.07 per milled SY

ITEM 453. **HMA JOINT SEALANT**

For traversal and longitudinal pavement joints, including sawcuts on side streets.

ITEM 454.5. **LATEX MODIFICATION OF HMA**

For Items 455.22 and 455.32.

ITEM 455.22 **SUPERPAVE SURFACE COURSE 9.5 - (SSC – 9.5)**

As shown on the plans and/or as directed by the Engineer.

ITEM 455.32 **SUPERPAVE INTERMEDIATE COURSE – 19.0 (SIC -19.0)**

As shown on the plans and/or as directed by the Engineer.

ITEM 455.42 **SUPERPAVE BASE COURSE - 37.5 (SBC – 37.5)**

As shown on the plans and/or as directed by the Engineer.

ITEM 455.60 **SUPERPAVE BRIDGE SURFACE COURSE - 9.5 (SSC-B – 9.5)**

As shown on the plans and/or as directed by the Engineer.

ITEM 455.71 **SUPERPAVE BRIDGE PROTECTION COURSE - 12.5 (SPC – 12.5)**

As shown on the plans and/or as directed by the Engineer.

ITEM 456. **WARM-MIX ASPHALT PAVEMENT**

For All Superpave Items

ITEM 472. **HOT MIX ASPHALT FOR MISCELLANEOUS WORK**

For miscellaneous work including at sawcuts at limits of work and local roads to protect castings and curb cuts.

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Town-City: CHELSEA SILVER LINE GATEWAY & WASHINGTON AVE (BRIDGE C-09-001) Year: 2014**ITEM 472.01** **IMPRINT CROSSWALK**

As shown on the plans and/or as directed by the Engineer.

ITEM 476. **CEMENT CONCRETE PAVEMENT**

For cement concrete pavement along busway and at new BRT stations, as shown on plans and as directed by Engineer.

ITEM 482.3 **SAWING ASPHALT PAVEMENT**

Used at driveways and limits of work, as shown on plans, and as directed by the Engineer.

ITEM 486.1 **SCORED CEMENT CONCRETE PAVEMENT**

As shown on plans, and as directed by the Engineer.

ITEM 504. **GRANITE CURB TYPE VA 4 - STRAIGHT**

Used at BRT Stations, as shown on plans, and as directed by the Engineer.

ITEM 504.1 **GRANITE CURB TYPE VA 4 - CURVED**

Used at BRT Stations, as shown on plans, and as directed by the Engineer.

ITEM 516. **GRANITE CURB CORNER TYPE A**

At sidewalks through driveway, as shown on plans and as directed by the Engineer.

ITEM 620.1 **STEEL W BEAM HIGHWAY GUARD (SINGLE FACED)**

Sta. 25+40 RT to Sta. 30+00 RT

Sta. 31+38 RT to Sta. 34+35 RT

Sta. 34+60 RT to Sta. 37+10 RT

ITEM 629.1 **PRECAST CONCRETE MEDIAN BARRIER - SINGLE FACED**

Sta. 50+59 RT to Sta. 51+79 RT

Sta. 77+05 LT to Sta. 81+35 LT

Sta. 78+61 LT to Sta. 81+84 LT

As shown on plans and as directed by the Engineer.

ITEM 629.2 **PRECAST CONCRETE MEDIAN BARRIER - DOUBLE FACED**

Sta. 25+04 LT to Sta. 30+59 LT

Sta. 25+20 RT to Sta. 30+40 RT

Sta. 31+45 LT to Sta. 38+62 LT

Sta. 40+84 LT to Sta. 53+80 LT

Sta. 72+38 RT to Sta. 73+83 RT

Sta. 77+17 RT to Sta. 79+60 RT

As shown on plans and as directed by the Engineer.

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Town-City: CHELSEA SILVER LINE GATEWAY & WASHINGTON AVE (BRIDGE C-09-001) Year: 2014**ITEM 644.148** **48 INCH CHAIN LINK FENCE (SWT) VINYL COATED (LINE POST OPT.)**

Sta. 25+04 LT to Sta. 30+59 LT
Sta. 25+20 RT to Sta. 30+40 RT
Sta. 31+45 LT to Sta. 38+62 LT
Sta. 40+84 LT to Sta. 53+80 LT
Sta. 58+90 RT to Sta. 71+90 RT
Sta. 66+59 RT to Sta. 67+27 RT
Sta. 67+36 RT to Sta. 72+59 RT
Sta. 74+69 RT to Sta. 75+69 RT

As shown on plans and as directed by the Engineer.

ITEM 644.172 **72 INCH CHAIN LINK FENCE (SWT) VINYL COATED (LINE POST OPT.)**

Sta. 40+00 RT to Sta. 41+60 RT
Sta. 53+81 LT to Sta. 73+51 LT
Sta. 74+18 LT to Sta. 76+59 LT

As shown on plans and as directed by the Engineer.

ITEM 644.196 **96 INCH CHAIN LINK FENCE (SWT) VINYL COATED (LINE POST OPT.)**

Sta. 45+30 RT to Sta. 46+80 RT
Sta. 46+66 RT to Sta. 50+62 RT
Sta. 51+50 RT to Sta. 56+60 RT
Sta. 53+75 LT to Sta. 65+75 LT

As shown on plans and as directed by the Engineer.

ITEM 690. **STONE MASONRY WALL REMOVED AND REBUILT IN CEMENT MORTAR**

Along Washington Avenue, as directed by the Engineer.

ITEM 697. **SEDIMENTATION FENCE**

To be used along the project limits of work for erosion control and as directed by the Engineer.

ITEM 697.1 **SILT SACK**

To be used at catch basins for erosion control and as directed by the Engineer.

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Town-City: CHELSEA SILVER LINE GATEWAY & WASHINGTON AVE (BRIDGE C-09-001) Year: 2014**ITEM 701. CEMENT CONCRTE SIDEWALK**

As shown on plans and as directed by the Engineer.

ITEM 701.1 CEMENT CONCRTE SIDEWALK AT DRIVEWAYS

As shown on plans at driveways and on construction details.

ITEM 701.2 CEMENT CONCRTE WHEELCHAIR RAMP

As shown on plans at wheelchair ramps and on construction details.

ITEM 703. HOT MIX ASPHALT DRIVEWAY

To be used at driveways along Washington Avenue and as directed by the Engineer

ITEM 740. ENGINEERS FIELD OFFICE AND EQUIPMENT (TYPE A)

For Engineer's Field Office for duration in months.

ITEM 745.01 BUS RAPID TRANSIT STATIONS

For construction of new Bus Rapid Transit Stations for the project, located at:

- Station 23+50 LT & RT (Mystic Mall)
- Station 40+ 50 LT (Downtown Chelsea)
- Station 43+25 RT (Downtown Chelsea)
- Station 57+50 LT & RT (Box District)
- Station 82+00 LT & RT (Eastern Avenue)

ITEM 745.02. MBTA INSPECTOR'S BOOTH

Station 23+60 RT (Mystic Mall Station) and as directed by the Engineer

ITEM 746.01 MBTA TEMPORARY COMFORT STATION

Station 21+90 RT (Mystic Mall Station) and as directed by the Engineer

ITEM 756. NPDES STORMWATER POLLUTION PREVENTION PLAN

For Contractor's preparation of the NPDES Permit Application and SWPPP

ITEM 756.1 STORMWATER DETENTION AREA

For the Reconfigured Storm Water Detention Area located at Station 81+00 RT.

ITEM 756.3 STORMWATER INFILTRATION SYSTEM

For Storm Water Infiltration associated with the proposed Vegetated Swale.

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Town-City: CHELSEA SILVER LINE GATEWAY & WASHINGTON AVE (BRIDGE C-09-001) Year: 2014**ITEM 765.11. TEMPORARY AND PERMANENT SEEDING**

Used in areas with proposed loam & seed and as directed by the Engineer

ITEM 765.2 SEEDING FOR EROSION CONTROL

Used for erosion control, at drainage swale and as directed by the Engineer

ITEM 767.12 COMPOST FILTER TUBES

To be used along the project limits of work for erosion control.

ITEM 767.8 BALES OF HAY FOR EROSION CONTROL

Used for erosion control and as directed by Engineer

ITEM 769. PAVEMENT MILLING MULCH UNDER GUARD RAIL

Used at guard rail as and as directed by the Engineer

ITEM 772.339 CEDAR-RED 'EMERALD SENTINEL' 7-8 FT.

As shown on the Landscaping Plans and/or directed by the Engineer

ITEM 773.412 PINE- WHITE 'FASTIGIATE' 8-10 FT.

As shown on the Landscaping Plans and/or directed by the Engineer

ITEM 775.450 LOCUST-HONEY-'HALKA' 2-2.5 INCH CALIPER

As shown on the Landscaping Plans and/or directed by the Engineer

ITEM 776.543 MAPLE-RED-'OCTOBER GLORY' 2-2.5 INCH CALIPER

As shown on the Landscaping Plans and/or directed by the Engineer

ITEM 777.542 PLANETREE- LONDON 2-2.5 INCH CALIPER

As shown on the Landscaping Plans and/or directed by the Engineer

ITEM 778.161 BIRCH- RIVER 'HERITAGE' 8-10 FT. CLUMP

As shown on the Landscaping Plans and/or directed by the Engineer

ITEM 778.387 CHERRY-SARGENT COLUMNAR 2.5-3 INCH CALIPER

As shown on the Landscaping Plans and/or directed by the Engineer

ITEM 785.631 INKBERRY 18-24 INCH

As shown on the Landscaping Plans and/or directed by the Engineer

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Town-City: CHELSEA SILVER LINE GATEWAY & WASHINGTON AVE (BRIDGE C-09-001) Year: 2014**ITEM 786.114** **CREEPING JUNIPER-'BLUE CHIP- 18-24 INCH**

As shown on the Landscaping Plans and/or directed by the Engineer

ITEM 789.333 **BAYBERRY SHRUB-NORTHERN 2-3 FEET**

As shown on the Landscaping Plans and/or directed by the Engineer

ITEM 790.635 **CORNUS SERICEA 'KELSYII' 18-24 INCH**

As shown on the Landscaping Plans and/or directed by the Engineer

ITEM 791.033 **ELDERBERRY 2-3 FEET**

As shown on the Landscaping Plans and/or directed by the Engineer

ITEM 793.043 **NINEBARK SHRUB -'SUMMER WINE' 2-3 FEET**

As shown on the Landscaping Plans and/or directed by the Engineer

ITEM 794.321 **SUMAC SHRUB -FRAGRANT 15-18 INCH**

As shown on the Landscaping Plans and/or directed by the Engineer

ITEM 794.731 **CLETHRA ALNIFOLIA 18-24 INCH**

As shown on the Landscaping Plans and/or directed by the Engineer

ITEM 794.803 **SWEETFERN 1 GALLON**

As shown on the Landscaping Plans and/or directed by the Engineer

ITEM 795.079 **VIBURNUM - WITHEROD 18-24 INCH**

As shown on the Landscaping Plans and/or directed by the Engineer

ITEM 795.081 **VIBURNUM - WITHEROD 24-30 INCH**

As shown on the Landscaping Plans and/or directed by the Engineer

ITEM 796.455 **SWITCH GRASS 'PRAIRIE SKY' 2 GALLON**

As shown on the Landscaping Plans and/or directed by the Engineer

ITEM 796.715 **BLACK EYED SUSAN 2 QUART**

As shown on the Landscaping Plans and/or directed by the Engineer

ITEM 796.725 **CARDINAL FLOWER 2 QUART**

As shown on the Landscaping Plans and/or directed by the Engineer

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Town-City: CHELSEA SILVER LINE GATEWAY & WASHINGTON AVE (BRIDGE C-09-001) Year: 2014**ITEM 796.768 DAYLILY - 'RED HOT RETURNS'**

As shown on the Landscaping Plans and/or directed by the Engineer

ITEM 796.803 NEW ENGLAND ASTER 1 GALLON

As shown on the Landscaping Plans and/or directed by the Engineer

ITEM 796.817 PURPLE CONEFLOWER 2 QUART

As shown on the Landscaping Plans and/or directed by the Engineer

ITEM 796.900 BUTTERLY MILKWEED 2 QUART

As shown on the Landscaping Plans and/or directed by the Engineer

ITEM 796.950 GOLDENROD 1 GALLON

As shown on the Landscaping Plans and/or directed by the Engineer

ITEM 796.100 NEPETA 'WALKERS LOW' 1 GAL.

As shown on the Landscaping Plans and/or directed by the Engineer

ITEM 801.42 4 INCH ELECTRICAL CONDUIT TYPE NM (DOUBLE)

For conduit along Washington Avenue associated with Bridge Replacement and as directed by the Engineer.

ITEM 801.44 4 INCH ELECTRICAL CONDUIT TYPE NM (4 BANK)

For conduit along Washington Avenue associated with Bridge Replacement and as directed by the Engineer.

ITEM 801.48 4 INCH ELECTRICAL CONDUIT TYPE NM (8 BANK)

For conduit along Washington Avenue associated with Bridge Replacement and as directed by the Engineer.

ITEM 801.52 5 INCH ELECTRICAL CONDUIT TYPE NM (DOUBLE)

For conduit along Washington Avenue associated with Bridge Replacement and as directed by the Engineer.

ITEM 801.56 5 INCH ELECTRICAL CONDUIT TYPE NM (6 BANK)

For conduit along Washington Avenue associated with Bridge Replacement and as directed by the Engineer.

ITEM 801.58 5 INCH ELECTRICAL CONDUIT TYPE NM (8 BANK)

For conduit along Washington Avenue associated with Bridge Replacement and as directed by the Engineer.

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ESTIMATE OF QUANTITIES - DETAIL SHEET

Town-City: CHELSEA SILVER LINE GATEWAY & WASHINGTON AVE (BRIDGE C-09-001) Year: 2014**ITEM 804.3** **3 INCH ELECTRICAL CONDUIT TYPE NM PLASTIC (UL)**

For Lighting, Electric and Spare Conduits along the new Silver Line Busway and as directed by the Engineer.

ITEM 804.4 **4 INCH ELECTRICAL CONDUIT TYPE NM PLASTIC (UL)**

For Lighting, Electric and Spare Conduits along the new Silver Line Busway and as directed by the Engineer.

ITEM 806.4 **4 INCH ELECTRICAL CONDUIT TYPE RM – GALVANIZED STEEL**

For Lighting, Electric and Spare Conduits along the new Silver Line Busway and as directed by the Engineer.

ITEM 806.41 **4 INCH ELECTRICAL CONDUIT TYPE RM – SPLIT GALVANIZED STEEL**

For Lighting, Electric and Spare Conduits along the new Silver Line Busway and as directed by the Engineer.

ITEM 810.1 **CONDUIT ENCASED IN CONCRETE**

For Communications and Spare Conduits along the new Silver Line Busway as shown on the plans and as directed by the Engineer.

ITEM 815.1 **TRAFFIC CONTROL SIGNAL LOCATION NO. 1**

Mast arms, foundations and other infrastructure elements for future traffic signals at the Everett Ave and Silver Line Busway intersection.

ITEM 815.2 **TRAFFIC CONTROL SIGNAL LOCATION NO. 2**

Mast arms, foundations and other infrastructure elements for future traffic signals at the Spruce St and Silver Line Busway intersection.

ITEM 815.3 **TRAFFIC CONTROL SIGNAL LOCATION NO. 3**

Traffic control signal for Busway at approaches to the Broadway Bridge.

ITEM 815.4 **TRAFFIC CONTROL SIGNAL LOCATION NO. 4**

Traffic control signal for Eastern Avenue at Cottage Street.

ITEM 820.10 **HIGHWAY LIGHTING - ROADWAY**

For Roadway Lighting System along the Silver Line Busway as shown on the plans and as directed by the Engineer.

ITEM 851.1 **TRAFFIC CONES FOR TRAFFIC MANAGEMENT**

For detour associated with the Washington Avenue Bridge Replacement

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ESTIMATE OF QUANTITIES - DETAIL SHEET

Town-City: CHELSEA SILVER LINE GATEWAY & WASHINGTON AVE (BRIDGE C-09-001) Year: 2014**ITEM 853.2 TEMPORARY BARRIER**

For barrier along Washington Ave during bridge construction. As shown on the plans and as directed by the Engineer.

ITEM 853.21 TEMPORARY BARRIER REMOVED & RESET

For removing and resetting barrier along Washington Ave during construction.

ITEM 853.42 TEMP. IMPACT ATTENUATOR FOR SHLDR, CAPABLE OF REDIRECTION

For removing and resetting barrier along Washington Ave during construction.

ITEM 860.04 4 INCH REFLECTORIZED WHITE LINE (PAINTED)

As shown on the Washington Avenue plans and as directed by the Engineer.

ITEM 861.04 4 INCH REFLECTORIZED YELLOW LINE (PAINTED)

As shown on the Washington Avenue plans and as directed by the Engineer.

ITEM 901. 4000 PSI, 1.5 IN., 565 CEMENT CONCRETE

For construction of various concrete pads, retaining walls and other structures.

ITEM 903. 3000 PSI, 1.5 IN., 470 CEMENT CONCRETE

For construction of various concrete work associated with the Washington Ave Bridge.

ITEM 918.100 MASONRY CLEANING

For cleaning existing stone masonry at the Washington Ave Bridge.

ITEM 918.300 MASONRY REPOINTING

For repointing existing stone masonry at the Washington Ave Bridge.

ITEM 950.5 TEMPORARY EARTH SUPPORT SYSTEM

Temporary earth support system for construction of the Washington Ave Bridge.

ITEM 953.3 BRACED STEEL SHEETING

Braced steel sheeting for construction of the Washington Ave Bridge.

ITEM 953.5 SEQUENTIAL PIT UNDERPINNING

For underpinning system of the building at 63 Washington Ave to facilitate construction of the Washington Ave Bridge structure.

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ESTIMATE OF QUANTITIES - DETAIL SHEET

Town-City: CHELSEA SILVER LINE GATEWAY & WASHINGTON AVE (BRIDGE C-09-001) Year: 2014**ITEM 975.61** **ORNAMENTAL FENCING TYPE I**

Sta. 22+23 LT to Sta. 24+42 LT
Sta. 56+10 RT to Sta. 57+22 RT
Sta. 56+77 RT to Sta. 58+08 RT
Sta. 56+75 LT to Sta. 57+22 LT
Sta. 58+25 LT to Sta. 58+68 LT
Sta. 58+25 RT to Sta. 58+92 RT
Sta. 81+35 LT to Sta. 82+57 LT
and/or as directed by the Engineer.

ITEM 975.62 **ORNAMENTAL FENCING TYPE II**

Sta. 38+50 ± LT to Sta. 39+50± LT and/or as directed by the Engineer.

ITEM 983.1 **RIPRAP**

For installation along sideslopes steeper than 2:1

ITEM 986. **MODIFIED ROCKFILL**

For installation along drainage channels including check dams.

ITEM 996.01 **WALL STRUCTURE, WALL NO. 1**

For Soldier Pile & Lagging Wall - Station 46+65 RT to Station 50+65 RT.

ITEM 996.02 **WALL STRUCTURE, WALL NO. 2**

For Soldier Pile & Lagging Wall - Station 51+60 RT to Station 56+60 RT.

ITEM 996.03 **WALL STRUCTURE, WALL NO. 3**

For Soldier Pile & Lagging Wall - Station 67+40 RT to Station 72+50 RT.

ITEM 996.04 **WALL STRUCTURE, WALL NO. 4**

For Soldier Pile & Lagging Wall - Station 44+65 RT to Station 45+30 RT.

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